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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/316,515	05/21/99	KRIG	D 279.112US1

QM12/0723

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EXAMINER	
EVANISKO,G	
ART UNIT	**PAPER NUMBER**
3762	12

DATE MAILED: 07/23/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/316,515	KRIG ET AL.	
	Examiner	Art Unit	
	George R Evanisko	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *07 June 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-91* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *28-57 and 90* is/are allowed.

6)☒ Claim(s) *1-3,23-27,58,59,63,64,66-70,88,89 and 91* is/are rejected.

7)☒ Claim(s) *4-22,60-62,65 and 71-87* is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *11* .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

I. Claims 1-3, 26, 27, 58, 59, 63, 88, 89, and 91 are rejected under 35 U.S.C. 102(e) as being anticipated by Hill (5814085). It is noted that the claims use the broad limitation of "from a most recent...".

Claim Rejections - 35 USC § 103

II. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23-25, 64, and 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill.

Hill discloses the claimed invention except for the sensor, register, and basing the pacing therapy on a second pacing interval based on the sensor (claims 23 and 64), basing the pacing therapy on the shorter of the two intervals (claim 24), providing a bounded range for the intervals (claim 25), and the filter including an IIR, FIR, and weighted averager (claims 67, 68, and 70). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the implantable pacing device as taught by Hill with the sensor, register, and basing the pacing therapy on a second pacing interval based on the sensor, basing the pacing therapy on the shorter of the two intervals, and providing a bounded range for the intervals since it was known in the art that pacemakers include sensors, registers, and base the pacing therapy on a second pacing interval based on the sensors, base the pacing therapy on the shorter of the two intervals, and provide a bounded range for the intervals to provide the pacer with other indicators of physiological demand so the pacer can control the pacing rate with a combination of the other indicators and limit the pacing rate to selected rates.

In addition, it would have been an obvious matter of design choice to one skilled in the art, to use an IIR, FIR, or weighted averager for the filter, since applicant has not disclosed that the IIR, FIR, or weighted averager provides any criticality and/or unexpected results and it appears that the invention would perform equally well with any filter, such as the processor providing desired signal processing, such as averaging, as taught by Hill to determine if the pacing rate should be changed.

Allowable Subject Matter

Claims 28-57 and 90 is allowed.

Claims 4-22, 60-62, 65, and 71-87 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

III. Applicant's arguments filed 6/7/01 have been fully considered but they are not persuasive.

The argument that Hill does not form the indicated pacing interval "from a most recent V-V interval duration and a previous value of the first indicated pacing interval" is not persuasive. The claims do not state "only from a most recent...", and therefore, the limitation is met when a previous value of the indicated pacing interval and the most recent V-V interval are used in any combination and with any other elements to determine the indicated pacing interval (which is accomplished in Hill, as seen throughout his specification and in particular in column 7). Although applicant argues that avgCL is not based on the most recent V-V interval, it is noted that Hill's CLnew is the most recent V-V interval (and not the avgCL) and is used in computing the first indicated pacing interval. In addition, Hill shows in figure 5, the controller (the microprocessor, ram, rom, and digital circuitry) performing the claimed limitations of V-V interval timer, register, and filter. It is noted that the filter, as described in the application and taken in its broadest reasonable interpretation, is just a system that provides the desired signal processing of the signals. It is noted that the register as claimed is just for storing the first indicated pacing interval and the controller must somehow store the pacing interval for later use for the addition of dT to the previous pacing interval (such as by using the memory provided, this

is a non-issue and/or well known, obvious, not novel to anyone having ordinary skill in the electronics art). For claims 67-70, the examiner is not taking official notice and is not required to provide a document in support of the 103 rejections. The examiner is stating that the specification has not provided and reasoning or criticality for the claimed elements, and lacking such, the examiner does not find patentable subject matter in those limitations (please see In re Kuhle, 188 USPQ 7). For claims 23-25 and 64, the examiner has provided references. In addition, it is noted that claim 24 only has the pacing therapy "based" on the shorter interval and does not say that the shorter interval is used in the pacing therapy.

Conclusion

This is a RCE of applicant's earlier Application No. 09/316515. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R Evanisko whose telephone number is 703 308-2612. The examiner can normally be reached on M-F 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 703 308-5181. The fax phone numbers for the organization where this application or proceeding is assigned are 703 306-4520 for regular communications and 703 306-4520 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-1148.

George R Evanisko
Primary Examiner
Art Unit 3762
7/17/1

GRE
July 17, 2001

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.